II. SPECIFICATION AMENDMENTS

Page 1, before line one, insert

(A) TITLE

Page 1, line 2, insert

(B) BACKGROUND

1. Field

Page 1, between lines 5 and 6, insert

2. Brief Description of Related Fields

Page 2, amend the paragraph on lines 4-18,

Fig. 1 represents a typical WCDMA cell 100, where there is a base station 101 in the middle of the cell. There are also two mobile stations 102 and 103 in the Fig. 1, and the communication between each mobile station and the base station is indicated with arrows. The base station broadcasts common control information to all the mobile stations in the cell, and it spreads this common control information with a certain spreading code. In a WCDMA system, a spreading code usually consists of two parts: a long scrambling code C_s and a short channelization code C_c. The scrambling code is effective to eliminate, for example, the effect of mulitpath propagation. The channelization codes that are used within a cell are orthogonal, and they are effective to distinguish~~distinct~~, for example, the transmission to each mobile station. In a WCDMA system, within a cell a same scrambling code C_s may be used for all downlink transmissions. The downlink

transmission are synchronized, and therefore the different channelization codes are enough for successful despreading of the transmitted signals. In the neighboring cells, other scrambling codes are used so that adjacent cells do not disturb each other's transmissions.

Page 5, amend the paragraph on lines 6-12,

The base station may indicate the use of a diversity scheme and two transceivers, for example, by transmitting a specific message on a broadcast channel or modulating the synchronization symbols. A certain synchronization symbol value indicates that the STTD ~~in~~ is on, and another value indicates that it is off. The mobile station may also determine the use of a diversity scheme by detecting the auxiliary pilot symbols. The mobile station may also use all three indicators of the diversity scheme.

Page 6, amend the paragraph on lines 8-18,

To obtain a reliable result, the signal transmitted by the primary transceiver has to be processed with the channel coefficient estimate $\hat{h}_2$ determined from the primary pilot and the signal transmitted by the secondary transceiver has to be processed with the channel coefficient estimate $\hat{h}_2$ determined from the auxiliary pilot. Not knowing from which antenna a certain symbol is transmitted causes unnecessary interference to the decision determining which symbol was sent. In case of synchronization symbols, this may cause that the mobile station cannot utilize the transmission diversity of, for example, the common control information for enhancing the quality of the received signal. Consequently, if the transmission diversity is in use, but the receiver does not notice this, the quality of the

received common control signal may be poorer than in a case where no transmission diversity is applied.

Page 6, between lines 25 and 26, insert

(C) SUMMARY

Page 8, between lines 31 and 32, insert

(D) BRIEF DESCRIPTION OF THE DRAWINGS

Page 9, between lines 17 and 18, insert

(E) DETAILED DESCRIPTION OF THE EXEMPLARY EMBODIMENTS

Page 11, amend the paragraph on lines 11-13,

This method works also if the length of the transmission pattern is longer than the frame. In that case step 502 is~~in~~ never entered, and only a certain part of the transmission pattern is used in sequential step~~s~~ 503.

Page 12, amend the paragraph on lines 26-32,

As an example, consider a simple pattern whose length is two slots and, for example, a synchronization symbol is transmitted once in a time slot. Index j thus has values 1 and 2. Further, consider that the pattern is alternating. The values 1 and 2 of index j may thus directly indicate the diversity antenna used to transmit~~using which~~ the synchronization symbol ~~is transmitted~~. Using the term active index, this can be expressed by saying that, for example, for the primary diversity antenna the index

value 1 is active, and for the auxiliary diversity antenna, the index value 2 is active.

Page 13, amend the paragraph on lines 13-20.

Fig. 7 shows a network element and an arrangement which employ a method according to the invention when they control the ~~transmit~~transmission of a certain sequence of symbols. The arrangement 700 for controlling the transmission of synchronization symbols comprises a control block 701, which controls the actual transmission of symbol *S* according to a transmission pattern. It chooses the diversity antenna for each symbol *S*. The transmission pattern is generated in a generation block 705 and the sequence of symbols S may be generated in the symbol block 704, which is not part of the arrangement 700.

Page 13, amend the paragraph on lines 21-27,

The arrangement 700 comprises also an indication block 702, which is responsible for indicating the antenna ~~using which~~ being used when the first symbols *S* of the sequence are~~is~~ transmitted. It also comprises a starting block 703, which, for example, detects the beginning of a frame, and starts the generation of the transmission pattern again from the beginning. The arrangement 700 may use any transmission method according to the invention. The blocks 701-705 may be implemented using, for example, microcontrollers and suitable program code.